

# Prevention

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## bulletin

## Top Infectious Disease News: 2002 in Review

By Victorio Vaz, D.V.M., Ph.D

### ACROSS THE NATION

#### ◆ Bioterrorism

was the big infectious disease issue again in 2002. The terrorist attack in the fall of



2001 followed by the threat posed by the release of *B. anthracis* highlighted the concerns about the public health system's vulnerability to bioterrorist attacks.

Consequently, this awareness was translated into new federal investments into the nation's public health system. The infusion of funds in 2002 partially reversed the trend of decades of underfunded public health infrastructures. Many issues were part of the national agenda for bioterrorism preparedness, but the need to formulate a plan to address the potential threat of smallpox as a biological agent and the ensuing debate about "who to vaccinate and when" were by far the most unique and challenging topics of discussion among government and public health officials, medical providers, first responders and the public. For more information visit [www.bt.cdc.gov](http://www.bt.cdc.gov).

◆ Another important emerging infectious disease in 2002 was **West Nile Virus (WNV)** with its rapid geographic expansion throughout most of the country.



More than 3,800 cases were reported nationwide as of December 31, 2002 compared to 62 cases in 1999, 21 in 2000 and 66 in 2001. This large outbreak in 2002 included approximately 250 deaths. For the first time, transmission via WNV blood products was confirmed. Most importantly, WNV has established itself permanently in the United States. See *related article on page 3*.

◆ New **hand hygiene** guidelines were developed by the Centers for Disease Control and Prevention (CDC) advocating the use of alcohol-based



hand rubs before and after contact with a patient as the preferred method of hand decontamination. For the first time, CDC recommends the use of alcohol-based hand rubs. Use of these products takes less time, is more convenient to use, is effective and causes

less irritation than washing the hands with soap and water. Given the difficulties in adherence to regular hand washing practices, better acceptance of the new requirements are hoped for, thus reducing the nosocomial infection rates in healthcare facilities. [www.cdc.gov/handhygiene](http://www.cdc.gov/handhygiene)

◆ Growing public concerns about **vaccine safety** issues led to further assessments by the Institute of Medicine's (IOM) Immunization Safety Review Committee in 2002. Based on the review of published scientific evidence, the panel again reiterated the lack of evidence associating vaccines with health issues such as Type 1 diabetes, certain infections such as pneumonia and meningitis, and autism. Unfortunately, on other fronts the panel was unable to find sufficient data to conclude whether or not some of the polio vaccine administered from 1955-1963, which was contaminated with the simian virus 40 (SV40), may have caused cancer. Polio vaccines being used today do not contain SV40. [www.iom.edu](http://www.iom.edu)



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Arizona  
Department of  
Health Services



Visit the ADHS Web site at [www.hs.state.az.us](http://www.hs.state.az.us)

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- ◆ New national guidelines designed to help health care providers protect patients from the health consequences of sexually transmitted diseases (STDs) were released. The **2002 Guidelines for the Treatment of Sexually Transmitted Diseases** integrate recommendations on the most effective treatment regimens, screening procedures and prevention strategies for STDs, which infect an estimated 15 million people each year in the United States. CDC revises these guidelines approximately every four years. Among other guidelines, CDC recommends that providers consider: screening annually for chlamydia in sexually active adolescents and young adult females, even in the absence of symptoms; alternative gonorrhea treatments in the wake of increasing drug resistance on the west coast; and expanding risk assessment and screening of men who have sex with men due to increased rates of syphilis and gonorrhea in this population in many areas of the country. [www.cdc.gov/std](http://www.cdc.gov/std)

## NLV accounts for 96% of all non-bacterial outbreaks of gastroenteritis.

- ◆ **Norwalk-like virus (NLV)** was implicated in a couple of well-publicized outbreaks affecting passengers on two cruises. The attack rate in these outbreaks exceeded 12%. Each of these were extensively covered by the media, but outbreaks due to NLV are quite common, often go unrecognized and are estimated to affect more than 20 million persons each year in the United States. NLV accounts for 96% of all non-bacterial outbreaks of gastroenteritis. [www.cdc.gov/ncidod/diseases/submenus/sub\\_norwalk.htm](http://www.cdc.gov/ncidod/diseases/submenus/sub_norwalk.htm)

## ARIZONA HEALTH ISSUES

- ◆ ***Naegleria fowleri* meningitis** claimed the lives of two 5-year old children in Phoenix. There were many perplexing aspects of this investigation by the Maricopa County Departments of Public Health and Environmental Services, the Arizona Department of Health Services and the Centers for Disease Control and Prevention. It appears that for these two simultaneous cases of an extremely rare disease in one city, the only identifiable common source of potential exposure was the community water supply. If that were the source of exposure, this would be the first time in recorded history that this occurred from a groundwater source. There are many unanswered questions that can be resolved only by extensive research. Until the issue is further studied, it is believed that either chlorination or strict quality monitoring of water for coliform bacteria has been effective in rendering water safe under all but the most rare of circumstances.



- ◆ Two major outbreaks of gastroenteritis associated with **Norwalk-like virus infection** were investigated in 2002. One affected participants of a junior golf tournament in Maricopa County and the other involved Colorado River rafters at the Grand Canyon. More than 70 and 40 cases were reported, respectively. Noroviruses (named after the original strain of Norwalk virus which caused an outbreak in 1968 in Norwalk, Ohio) were detected in some of the stool samples of cases in both outbreaks and also in some of the environmental samples (portable toilets and water samples) from the Colorado River outbreak. One death was reported among the golf tournament participants, apparently due to asphyxia from

aspiration of vomitus. Though not conclusive, water appeared to be the most likely primary source of infection in each outbreak: water and ice from manually filled jugs available to players and staff at the golf tournament and river water among rafters.

Recommendations were made to minimize the risk of such outbreaks.

- ◆ As shown in the table on page 7, a considerable increase in reported cases of **coccidioidomycosis** was observed in 2002.

Increasingly higher peak periods of seasonal incidence during the winter months appear to be responsible for the increasing trend, since the baseline rates between peak periods remained relatively stable. Analyses of the data since 1998 indicate that incidence increased in all age groups with persons aged  $\geq 65$  years having the highest rates but persons  $<20$  years showing the greatest relative increases.

## The number of reported hepatitis A cases has been declining dramatically since 1997

- ◆ An increase was also observed for: **animal rabies** with 143 animals (a record number documented to date) testing positive for rabies in 2002, compared to 129 animals in 2001. An increase in **campylobacteriosis** was also noted since 1998. On a positive note, the number of reported **hepatitis A** cases has been declining dramatically since 1997, in the wake of immunization requirements.



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# Preparing for West Nile Virus in Arizona

By Craig Levy

The total number of West Nile virus (WNV) cases reported nationwide to the Centers for Disease Control and Prevention at the end of last year exceeded 3,800 and the number of deaths approached 250. The WNV was first detected in the United States in New York City in 1999; since then, it has spread widely throughout most of the country. WNV activity was detected in four states in 1999, 12 states and the District of Columbia (D.C) in 2000, 27 states and D.C. in 2001 and 44 states and D.C. in 2002. WNV activity has been documented in all contiguous states (and the District of Columbia) with the exception of Arizona, Nevada, Oregon and Utah.

Last year was characterized by a more dramatic spread of WNV westward and southward, a higher morbidity and mortality, and the confirmation of WNV transmission via blood products. Thirty nine states, of the 44 reporting WNV activity in 2002, reported human cases; of these, five states reported more than 200 cases each: Indiana (294), Louisiana (329), Michigan (565), and Ohio (432).

WNV is expected to spread into Arizona this year. Currently in Arizona, surveillance efforts to detect and respond to the threat of WNV include testing mosquito pools, dead birds, chicken blood samples and blood and/or cerebrospinal fluid (CSF) from suspected human cases. The Department tested over 750 mosquito samples, 1,600 chicken blood samples, and over 100 human specimens in 2002.

Culex mosquitoes, the primary vectors for WNV transmission, are active from dusk to dawn and can be found

throughout Arizona. Although mosquito bites are the main mode of transmission, a few cases of WNV transmission via contaminated blood products and/or organ donation (obtained from WNV infected patients) were reported in 2002. In Arizona, the transmission of mosquito-borne viruses such as St. Louis encephalitis (SLE) and the western equine encephalitis (WEE) tends to occur typically from May through October.

The Arizona Department of Health Services performs routine testing for arboviruses such as WNV, St. Louis encephalitis (SLE), western equine encephalitis (WEE) and eastern equine encephalitis (EEE) from May through October. Testing is available to hospitalized patients with encephalitis or meningitis. Please report promptly any suspected cases of mosquito-borne encephalitis or meningitis to your local health department prior to submitting specimens. Serum and/or CSF along with the appropriate form (Microbiology Submission Form #1) can be sent to: Arizona State Health Laboratory, Attn: Serology, 1520 West Adams, Phoenix, Arizona 85007.

Ideally, paired serum samples should be submitted, including an acute specimen collected during the first eight days of illness and a convalescent serum collected 14-21 days after the acute specimen.

For more information on WNV surveillance in Arizona, contact your local health department, or the ADHS Vector-Borne Diseases Program staff at 602.230.5820.

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## CLINICAL SUSPICION

Diagnosis of WNV infection is based on a high index of clinical suspicion and specific laboratory tests.

- WNV, or other arboviral diseases such as St. Louis encephalitis, should be strongly considered in persons who develop unexplained encephalitis or meningitis in summer or early fall, particularly those >50 years of age.
- The local presence of WNV enzootic activity or other human cases should further raise suspicion.
- Travel and exposure history is also important.
- Contact your local health department to report suspect cases and inquire about laboratory testing.

## Clinical Features of WNV infections

- Most WNV infections are mild and often clinically unapparent.
- Approximately 20% of those infected develop a mild illness (West Nile fever).
- Approximately 1 in 150 infections will result in severe neurological disease.
- The incubation period is thought to range from 3 to 14 days.
- Symptoms generally last 3 to 6 days.
- Mild illness tends to be characterized by sudden onset of fever often accompanied by one or more of the following: malaise, anorexia, nausea, vomiting, eye pain, headache, myalgia, rash or lymphadenopathy.
- The most significant risk factor for developing severe neurological disease is advanced age.
- In recent outbreaks, symptoms occurring among patients hospitalized with severe disease included fever, weakness, gastrointestinal symptoms and change in mental status; also reported were severe muscle weakness and flaccid paralysis, maculopapular or morbilliform rash involving neck, trunk, arms or legs, ataxia and extrapyramidal signs, cranial nerve abnormalities, myelitis, optic neuritis, polyradiculitis and seizures.
- Encephalitis is more commonly reported than meningitis.

## Laboratory Findings Among Patients in Recent Outbreaks

- Total leukocyte counts in peripheral blood were mostly normal or elevated, with lymphocytopenia and anemia also occurring.
- Examination of the cerebrospinal fluid (CSF) showed pleocytosis, usually with a predominance of lymphocytes.
- Protein was universally elevated.
- Glucose was normal.
- Computed tomographic scans of the brain mostly did not show evidence of acute disease, but in about one-third of patients, magnetic resonance imaging showed enhancement of the leptomeninges, the periventricular areas, or both.

For more information on West Nile Virus (WNV) Infection Information for Clinicians visit the CDC website at [www.cdc.gov/ncidod/dvbid/westnile/resources/fact\\_sheet\\_clinician.htm](http://www.cdc.gov/ncidod/dvbid/westnile/resources/fact_sheet_clinician.htm)



# New Targeted Screening Plan for Prevention

Since publication of the 1991 Centers for Disease Control and Prevention statement *Preventing Lead Poisoning in Young Children*, epidemiological studies and lead poisoning prevention programs in many states have found that targeted (selective) screening is more appropriate than universal screening. In consideration of these data, the CDC revised its guidelines in 1997.

The revised guidelines provide, for the first time, a basis for the Arizona Department of Health Services to decide on an appropriate screening policy using local lead poisoning data and housing data collected by the US Bureau of the Census. This strategy is intended to increase the screening and follow-up care of children who most need these services, to ensure that higher risk children are screened, to ensure that prevention approaches are appropriate to Arizona, and to reduce unnecessary testing of children unlikely to be exposed to lead.

## Arizona Childhood Targeted Lead Poisoning Screening Plan

- All children living in targeted ZIP codes should have a blood lead test at 12 and 24 months of age. Children aged 36 to 72 months should be tested if they have not been previously tested.
- All children covered by the Arizona Health Care Cost Containment System (AHCCCS) should be tested according to the Centers for Medicare and Medicaid Services requirements, as follows: test all children at 12 and 24 months of age; test children at 36 to 72 months of age if they have not been previously tested.
- For children not living in a targeted ZIP code area, health care providers should conduct an individual risk evaluation in order to determine whether those children are at increased risk of having an elevated blood lead level (BLL).

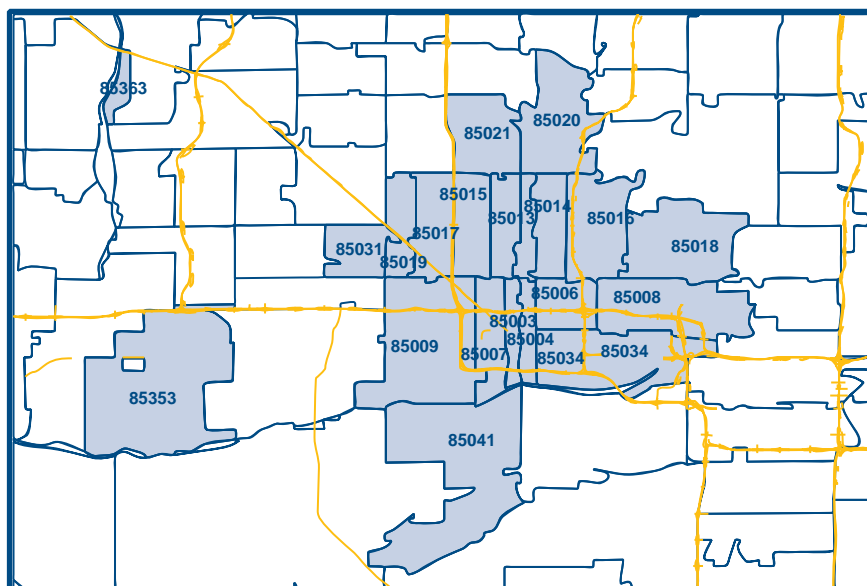
## Lead Effects

Lead has adverse effects on nearly all organ systems in the body. It is especially harmful to the developing brains and nervous systems of children under the age of 6 years. At very high blood lead levels, children can have severe brain damage or even die. At blood lead levels as low as 10 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ), children's intelligence, hearing, and growth are affected. This damage can be stopped if a child's lead exposure is reduced.

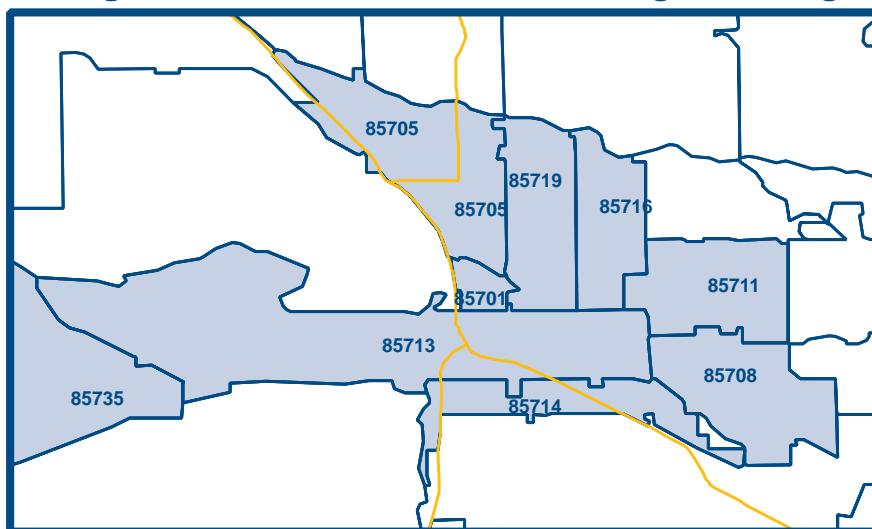
## Lead Exposure

Laboratories and health care providers reported 256 children with lead poisoning ( $>10 \mu\text{g}/\text{dL}$ ) in 2002. Lead-based paint in older homes continues to be a significant remaining source of lead poisoning for children in Arizona. The older the home, the more likely it is to contain lead based paint that can be a source of lead poisoning. Homes built before 1960 are the most likely to be a potential source for lead poisoning. Home remedies and take-home exposure were other lead sources that were identified during environmental investigations.

**Greater Phoenix Area Map of ZIP Codes Targeted for Childhood Lead Poisoning Screening**



**Tucson Area Map of ZIP Codes Targeted for Childhood Lead Poisoning Screening**



# Preventing Childhood Lead Poisoning in Arizona



## Arizona Reporting Rules

Arizona Administrative Code R9-4-301 requires physicians to report elevated blood lead levels.

### Children <16 years of age:

All blood lead levels of 10 ug/dL are reportable within 5 working days from the date of receipt of the laboratory results. Blood lead levels of 45 ug/dL are reportable within 1 business day.

### Adults >16 years of age:

All blood lead levels of 25 ug/dL are reportable within 5 working days from the date of receipt of the laboratory

results. Blood lead levels of 60 ug/dL are reportable within 1 business day.

Please submit report by phone, mail or fax. If faxed, please call ahead to ensure confidentiality.

Lead Poisoning Prevention Program  
Arizona Department of Health Services  
3815 North Black Canyon Highway  
Phoenix, Arizona 85015  
Local: 602-230-5830  
Toll Free: 1-800-367-6412  
FAX: 602-230-5933  
[www.hs.state.az.us/phs/oeh/invSurv/lead/index.htm](http://www.hs.state.az.us/phs/oeh/invSurv/lead/index.htm)

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## Development of the Lead Poisoning Risk Index (LPRI)

The Arizona Department of Health Services and the Childhood Lead Poisoning Screening Coalition used available lead poisoning prevalence rates and pre-1960 housing data for each ZIP code to develop a Lead Poisoning Risk Index for each ZIP code in Arizona. Data sources used to develop the LPRI include: 1) AHCCCS lead screening utilization reports for 1998 through 2001; 2) ADHS Registry case data from 1998 to 2001; and 3) 2000 Census data for pre-1960 housing. The following table displays the results of the ZIP codes considered to be at higher risk for Lead Poisoning.

## Zip Codes of High Risk for Lead Poisoning

<b>APACHE</b>	85546 Safford	85329 Cashion	<b>PINAL</b>
85927 Greer	85552 Thatcher	85353 Tolleson	85228 Coolidge
85932 Nutrioso	<b>GREENLEE</b>	85354 Tonopah	85237 Kearny
85936 St. Johns	85534 Duncan	85363 Youngstown	85241 Picacho
86507 Lukachukai	85540 Morenci	85390 Wickenburg	85245 Red Rock
<b>COCHISE</b>	85922 Blue	<b>MOHAVE</b>	85272 Stanfield
85603 Bisbee	<b>MARICOPA</b>	86433 Oatman	85273 Superior
85607 Douglas	85003 Phoenix	86437 Valentine	85623 Oracle
85608 Douglas	85004 Phoenix	86438 Yucca	<b>SANTA CRUZ</b>
85610 Elfrida	85006 Phoenix	<b>NAVAJO</b>	85611 Elgin
85613 Ft. Huachuca	85007 Phoenix	86039 Kykotsmobi	85621 Nogales
85627 Pomerine	85008 Phoenix	86042 Polacca	85640 Tumacacori
85630 St. David	85009 Phoenix	86043 Second mesa	85631 San Manuel
85638 Tombstone	85012 Phoenix	86047 Winslow	<b>YAVAPAI</b>
85643 Willcox	85013 Phoenix	<b>PIMA</b>	85362 Yarnell
<b>COCONINO</b>	85014 Phoenix	85321 Ajo	86301 Prescott
86015 Bellemont	85015 Phoenix	85633 Sasabe	86303 Prescott
86022 Fredonia	85016 Phoenix	85634 Sells	86324 Clarkdale
86046 Williams	85017 Phoenix	85639 Towapa	86331 Jerome
<b>GILA</b>	85018 Phoenix	85701 Tucson	86337 Seligman
85235 Hayden	85019 Phoenix	85705 Tucson	<b>YUMA</b>
85501 Globe	85020 Phoenix	85708 Tucson	85333 Dateland
85539 Miami	85021 Phoenix	85711 Tucson	85347 Roll
<b>GRAHAM</b>	85031 Phoenix	85713 Tucson	85349 San Luis
85531 Central	85032 Phoenix	85714 Tucson	85350 Somerton
85536 Ft. Thomas	85034 Phoenix	85716 Tucson	85356 Wellton
85543 Pima	85040 Phoenix	85719 Tucson	85364 Yuma
	85041 Phoenix	85735 Tucson	



# Noteworthy...

## Correction

In the January/February 2003 issue of *Prevention Bulletin*, the article on MMR vaccine and autism on Page 3 was not printed in its entirety. It is reprinted correctly below.

## MMR vaccine and autism

In the past few years there have been some reports suggesting an association between the measles, mumps and rubella (MMR) vaccine and autism. Most of the evidence suggestive of a link has been based on case-series, cross-sectional studies and ecologic studies. Many larger studies and reviews of data have failed to detect any association. Most recently, however, a population-based study conducted in Denmark provided strong evidence against the hypothesis that MMR vaccination causes autism (*N Engl J Med* 2002; 347:1477-82).

## Input Invited On Draft Communicable Disease Rules

The Bureau of Epidemiology and Disease Control Services (BEDCS) has completed draft rule changes for the communicable disease rules in 9 A.A.C. 6, Articles 1, 2, 3, 5, and 6. At this time, BEDCS is soliciting input from interested persons so that major issues can be identified and, if possible, resolved before the formal rulemaking process begins. The draft rules are available for review on the ADHS website by going to [www.hs.state.az.us/diro/admin\\_rules/draft4.htm](http://www.hs.state.az.us/diro/admin_rules/draft4.htm) and selecting one of the links for "Communicable Diseases and Infestations." If you do not have access to the ADHS website and would like a copy of the draft rules, please call 602.230.5862 to request a copy. Comments can be sent to Sarah Harpring at 1647 E. Morten Ave, Phoenix, AZ 85020 or [sharpri@hs.state.az.us](mailto:sharpri@hs.state.az.us) until April 28, 2003.

## Vital Records Has Moved

The Office of Vital Records for the State of Arizona has moved from its Glendale location to 1818 W. Adams in downtown Phoenix. The new location provides a more centralized location and an improved facility for providing serv-

ice. For those visiting this office, free parking is available in the parking garage immediately behind the main health department building at 1740 W. Adams.

Vital Records provides copies of birth and death records for individuals who were born or died in Arizona and changes for those records. These documents can be obtained three different ways. In-person customer service is available at the 1818 W. Adams location. Certificates may be applied for via internet at [www.vitalchek.com](http://www.vitalchek.com) or through the mail. Applications can be obtained at many locations throughout the state including hospitals, schools and health departments. For information on requirements for obtaining a certificate, Vital Records can be reached at 602.364.1300

## Save the Date!

Mark your calendars now for these upcoming events:

### March 17-20

**National Immunization Conference** in Chicago. Online information available at: [www.cdc.gov/nip/NIC](http://www.cdc.gov/nip/NIC)

### April 8-10, 2003

**3rd Annual Joint Vector-borne & Zoonotic Disease/Bioterrorism Conference.** Hosted by the Arizona Department of Health Services. The conference will be held at the Mesa Public Safety Training Facility at 3260 North 40th Street. For information, please call Teresa Navarro at 602.230.5945 or by email at [mnavarro@hs.state.az.us](mailto:mnavarro@hs.state.az.us).

### April 13-19

**National Infant Immunization Week** Online information available at: [www.cdc.gov/nip/publications/niw/default.htm](http://www.cdc.gov/nip/publications/niw/default.htm)

### April 16

**TAPI 7th Annual "Big Shots for Arizona" Awards Banquet.** For more information please call 602.253.0090

### May 28-30

**5th National Immunization Coalition Conference** at the Westin Kierland Resort in Phoenix-Scottsdale. Online information available at: [www.pub-lichealth.usf.edu/conted/imm03.html](http://www.pub-lichealth.usf.edu/conted/imm03.html)

## New TB Testing Highlights World TB Day

By Dr. Cheryl McRill

March 24 is World TB Day, the anniversary of the date in 1882 when Robert Koch announced his discovery of the organism responsible for what was then the leading cause of death in Western Europe, tuberculosis (TB). Few people realize the Robert Koch also developed the tuberculin skin test (TST) using purified protein derivative (PPD) and recognized its significance as an indicator of latent TB infection. This test has remained in continuous use almost unchanged for over 100 years. In fact, until recently it was the only test available to detect latent TB infection. Now there is an alternative, the new blood test called QuantiFERON-TB.

The QuantiFERON-TB blood test was approved by the FDA in October 2001. Obvious advantages of a blood test over the TST include that it does not require a return visit by the patient for test reading and does not rely on skilled nursing staff to administer. In addition, it may be better than the tuberculin skin test at distinguishing a reaction due to TB infection from a reaction due to BCG vaccination or non-tuberculous mycobacteria. The test involves drawing a heparinized whole blood sample from the patient, incubating the sample overnight with a test tuberculosis antigen and control antigens, then drawing off the plasma and measuring the amount of interferon-gamma (IFN- $\gamma$ ) which has been produced by the patient's lymphocytes in cell-mediated immune response to the antigens.

One difficulty in evaluating the new test has been the lack of a reliable "gold standard" for comparison. The only other test for detection of latent TB is the TST, which is subject to both false positives and false negatives.

Continued on page 8

# SUMMARY OF SELECTED REPORTABLE DISEASES

Year to Date (January - December, 2002)<sup>1,2</sup>

	Jan - Dec 2002	Jan - Dec 2001	5 Year Median Jan - Dec
<b>VACCINE PREVENTABLE DISEASES:</b>			
<i>Haemophilus influenzae</i> , serotype b invasive disease (<5 years of age)	7 (5)	9 (5)	6 (3)
Measles	0	1	1
Mumps	1	2	6
Pertussis (<12 years of age)	280 (132)	382 (164)	102 (52)
Rubella (Congenital Rubella Syndrome)	0 (0)	0 (0)	2 (0)
<b>FOODBORNE DISEASES:</b>			
Campylobacteriosis	733	635	591
<i>E.coli</i> O157:H7	40	30	42
Listeriosis	18	10	19
Salmonellosis	825	737	844
Shigellosis	666	483	598
<b>VIRAL HEPATITIDES:</b>			
Hepatitis A	305	409	700
Hepatitis B	256	164	178
Hepatitis B: non-acute <sup>3</sup>	1131	1502	*
Hepatitis C	6	9	21
Hepatitis C: non-acute <sup>3</sup>	4721	3449	*
<b>INVASIVE DISEASES:</b>			
<i>Streptococcus pneumoniae</i>	790	783	695
<i>Streptococcus</i> Group A	314	187	187
<i>Streptococcus</i> Group B in infants <30 days of age	27	55	42
Meningococcal Infection	32	21	44
<b>SEXUALLY TRANSMITTED DISEASES:</b>			
Chlamydia	14929	14326	12046
Gonorrhea	3785	3909	4101
P/S Syphilis (Congenital Syphilis)	200 (19)	180 (32)	180 (21)
<b>DRUG-RESISTANT BACTERIA:</b>			
TB isolates resistant to at least INH (resistant to at least INH & Rifampin)	11 (1)	12 (3)	11 (2)
Vancomycin resistant <i>Enterococci</i> isolates	1043	876	876
<b>VECTOR-BORNE &amp; ZOONOTIC DISEASES:</b>			
Hantavirus Pulmonary Syndrome	3	1	3
Plague	0	0	1
Animals with Rabies <sup>4</sup>	143	129	81
<b>ALSO OF INTEREST IN ARIZONA:</b>			
Coccidioidomycosis	3351	2301	1809
Tuberculosis	263	289	262
HIV	498	555	498
AIDS	537	522	537
Lead Poisoning (<16 years of age)	279 (256)	197 (169)	275 (227)
Pesticide Poisoning <sup>5</sup>	21	26	25

<sup>1</sup> Data are provisional and reflect case reports during this period except Lead Poisoning which is by date of diagnosis.

<sup>2</sup> These counts reflect the year reported or tested and not the date infected.

<sup>3</sup> Case counts for non-acute Hepatitis B and C are not available before 1998.

<sup>4</sup> Based on animals submitted for rabies testing.

<sup>5</sup> Not all reports will be confirmed as meeting the case definition for pesticide poisoning upon further investigation.





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## Recent Pertussis Death Highlights Need For More Awareness of Disease

By Ken Komatsu

Outbreaks of pertussis and a recent death in a neonate stress the continuing threat posed by the disease and its potential severity, particularly in infants less than four months of age. In the past six months, outbreaks of pertussis were reported in Maricopa, Mohave, and Yavapai counties. The number of cases reported in Arizona in 2002 (280) was lower than that for 2001 (382); however, incidence has been cyclical with peak rates reported in 2001, 2000, 1998, 1995 and 1992. The highest rate reported since 1990 was in 2001 (7.2/100,000). Three infant deaths were also reported in 2001.

The last fatality was in a full term newborn that was taken initially to an emergency room and sent home with a diagnosis of "viral infection." Five days later the infant was admitted to a Maricopa County hospital with bronchiolitis and hypoxia. By that time, the patient had been coughing and show-

ing signs of congestion for one week. A nasal swab was positive by direct fluorescent antibody test for RSV and a nasopharyngeal swab was positive by direct fluorescent antibody and ultimately grew *Bordetella pertussis*. The infant progressed into severe respiratory distress and died from acute cardiogenic shock.

Please contact your county or tribal health department immediately if pertussis is suspected. Health departments can help you identify exposed contacts needing prophylaxis and can facilitate culturing of nasopharyngeal swabs through the Arizona Department of Health Services' Laboratory. Your role in early identification of these cases is critical to preventing further spread.

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## World TB Day

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A recent study (JAMA Oct 10, 2001, 286(14):1740-1747) reported that while the overall agreement between the TST and the IFN- $\gamma$  assay was 83.1%, those who had been previously BCG-vaccinated were 7 times more likely to have a positive TST and a negative IFN- $\gamma$  test than an unvaccinated person. Among unvaccinated persons with a positive TST and a negative IFN- $\gamma$  test, 21.2% showed an IFN- $\gamma$  response to non-tuberculous mycobacteria.

Robert Koch's discovery in 1882 made it possible to dream of eliminating tuberculosis. Although the dream is far from realized 121 years later, the availability of a new and improved tool for detecting latent TB infection may help in that effort.

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